

### **REMARKS/ARGUMENTS**

Reexamination of the captioned application is respectfully requested.

#### **A. SUMMARY OF THIS AMENDMENT**

By the current amendment, Applicants basically:

1. Amend claims 6, 8, 10, 13 and 16 to moot the claim objections of enumerated paragraph 3 of the office action.
2. Amend claims 1, 21, 25, and 33.
3. Cancel claims 10, 11, 13, 14, 16, 17, 22-24, 27-32 and 35 without prejudice or disclaimer.
4. Respectfully traverse all prior art rejections.

#### **B. THE AMENDMENTS TO THE CLAIMS**

Independent claims 1, 21, and 33 have been amended to specify that the signal line is covered by a light shielding film having an insulating property that is provided on the signal line; that the interlayer insulating film is provided on the light shielding film; wherein the pixel electrode is provided on the interlayer insulating film; and that in view of a vertical direction with respect to the surface of the insulating substrate, a surface of the signal line and the gap provided between the signal line and the pixel electrode are covered by the light shielding film. All amendatory limitations are supported by the original disclosure and pending claims, so that no new matter nor no new issues are presented. Moreover, without being narrowing, the amendatory limitations merely clarify what is already extant in the claims, and moot the rejection of independent claim 1 under 35 USC § 112, second paragraph.

#### **C. PATENTABILITY OF THE CLAIMS**

Claims 1, 4, 6, 8, 10, 13, 16, 19-22 and 24-35 stand rejected under 35 USC 103(a) as being unpatentable over AAPA (page 1, line 8 to page 9, line 2 of the specification and

Figs. 12 and 13) in view of JP 07-128685 to Matsuo. Claims 3, 5, 7, 9, 11, 14, 17 and 23 stand rejected under 35 USC 103(a) as being unpatentable over JP 07-128685 to Mutsumi in view of U.S. Patent 6,396,470 to Zhang et al. All prior art rejections are respectfully traversed for at least the following reasons.

Amended claims 1, 21, and 33 differ from Matsuo, not only by the fact that Matsuo uses a wiring layer (to which a specific potential is applied) as a supposed light shielding film, but also in their structures. According to amended claims 1, 21, and 33, for example, it is essential that the light shielding film have an insulating property. The alleged light shielding film of Matsuo is not an insulator, but a conductor.

In the "Response to Arguments" section (enumerated paragraph 2 beginning on page 2 of the office action), taken in conjunction with the slight recasting of the obviousness rejection (enumerated paragraph 8 beginning on page 6 of the office action), the office action has emphasized that the primary basis for the prior art rejection of independent claim 1 is the alleged admitted prior art (AAPA) of Fig. 12 and Fig. 13 of Applicants' specification. The office action states that AAPA Fig. 13 shows only insulating layer 115 between pixel electrode 103 and signal line 102 (the office action interprets Fig. 13 as layer 115 including light shielding film 108). The office action then argues that the only teaching of JP 07-128685 to Matsuo used for the combination is the fact of a gap between source line 2 and pixel electrode 3 of Fig. 2 of JP 07-128685 to Matsuo (a black mask 8 in the gap).

In essence, therefore, the office action purports to take from JP 07-128685 to Matsuo only the fact that the pixel electrode 103 and signal line 102 of the alleged admitted prior art would be formed, at the suggestion of JP 07-128685, to be offset in a vertical direction so as to have a gap. The Examiner has improperly dismissed Applicants' comments about the problem solved by JP 07-128685 and the additional particular properties (e.g., conductivity of the black mask) required for operation by JP 07-128685.

As argued before, JP 07-128685 may fortuitously illustrate a gap (whether intended or not) in the drawing, but nowhere makes a textual comment about the existence or significance of any such gap. Moreover, Applicants' contend that the person skilled in the art must look at JP 07-128685 in its entirety to determine precisely what suggestion JP 07-128685 might make to the person skilled in the art. Applicants have argued that if somehow the reader of JP 07-128685 were to note any "gap", that such gap would be taken in combination with the conductive nature of the black mask. In view of the conductive nature of the black mask of JP 07-128685 and the inappropriate employment of a conductor in the alleged admitted prior art, it would not occur to the person skilled in the art to use the particular geometry of the conductive black mask of JP 07-128685 for the Fig. 13 APA. Further, the Fig. 2 teaching of JP 07-128685 would also be dismissed because the conductive black mask 8 of JP 07-128685 is so localized around the source line 2.

A prior art reference must be evaluated as an entirety, and all of the prior art must be evaluated as a whole. It is not "features" but subject matter of invention "as a whole" that must be considered. The fact that features, even distinguishing features, are "disclosed" in prior art is not alone insufficient; test is whether claimed invention as whole, in light of all teachings of references in their entireties, would have been obvious to one of ordinary skill in art at time invention was made. *Connell et al. v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983). Moreover, it could be argued that it is impermissible within the framework of §103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. *In re Wesslau*, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965); see also *In re Mercer*, 515 F.2d 1161, 1165-66, 185 USPQ 774, 778 (CCPA 1975).

The office action appears to take the position that the insulating property of the light shielding film is not essential (the office action has noted that original claims 12, 15, and 18 referred to the light shielding film as being metal, i.e. a conductor). The fact that

Applicants' disclosure has different embodiments with different features and advantages does not, however, militate against patentability.

In the above regard, an advantage of *some* of Applicants' embodiments is reduction of display unevenness that is caused because parasitic capacitance between the transparent pixel electrode and the signal line varies in a display area. In order to achieve this advantage, there is provided between the pixel electrode and the signal line an area where a voltage is not applied on a liquid crystal layer from the pixel electrode when a voltage is applied on the pixel electrode. Original claims 12, 15, and 18 do not disclose that a potential is applied to a gap between the pixel electrode and the signal line.

The configuration in which the light shielding film has an insulating property is one of several configurations for preventing a potential to be applied to the gap, and such configuration is one of important means to achieve the advantage. Thus, Applicants' independent claims and Matsuo are entirely different from each other in whether a potential is applied on the gap or not.

The office action alleges that Figs. 6 and 7 of Matsuo are not used in the rejection. However, Matsuo was made in order to solve the problems shown in Figs. 6 and 7. Figs. 6 and 7 of Matsuo do not disclose a configuration in which a gap is provided between the transparent pixel electrode and the signal line that are provided via the interlayer insulating film. This indicates that formation of the Matsuo gap accompanies formation of the Matsuo wiring layer to which a specific potential is applied. Therefore it is improper for the office action to apply the feature of the gap alone without its proper context. Taking only the gap from Matsuo is inconsistent with Matsuo. It is unreasonable and improper to utilize Matsuo's gap alone for combination with the alleged admitted prior art (AAPA).

Figs. 12 and 13 of the alleged admitted prior art disclose that the black mask BM is formed for the signal line in a self-aligning manner so as to improve the aperture ratio of the liquid crystal display device. Therefore, providing a gap between the transparent pixel electrode and the signal line in Figs. 12 and 13 of the alleged admitted prior art

would be against the object of the alleged admitted prior art. Matsuo does not teach any advantage of the gap, and providing the gap in the alleged admitted prior art would be against the object of the alleged admitted prior art. Therefore, there is no incentive to provide the gap in the alleged admitted prior art.

In Figs. 12 and 13 of the alleged admitted prior art, the black mask BM is formed for the signal line in a self-aligning manner. Therefore, if the gap would be provided in the configurations of Figs. 12 and 13 of the alleged admitted prior art, the gap would not be covered by the black mask BM. Further, covering the gap by the black mask BM would be contrary to the object of the alleged admitted prior art. Therefore, a person skilled in the art would not apply Matsuo to the alleged admitted prior art, and it would not have been easy for a person skilled in the art to conceive the subject matter of the independent claims by applying Matsuo to AAPA.

In Matsuo, it is essential that a specific potential is applied to the wiring layer that covers the signal line. Therefore, providing an insulating black mask for the wiring layer would be against the object of Matsuo. Therefore, a person skilled in the art would not combine Matsuo with Zhang.

### **C. MISCELLANEOUS**

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

TSUBATA, T. et al.  
Serial No. 10/717,917

**Atty Dkt:** 1035-482  
**Art Unit:** 2629

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

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